# OMIC R&D TECHNOLOGY BOARD
New Paradigm for the Synthesis of Manufacturing Tolerances
Request for Proposals

1.0 Project Information

- **Project Title:** New Paradigm for the Synthesis of Manufacturing Tolerances
- **Project Type:** Joint General Project
- **Project Description:** This proposal suggests developing a smart interface that allows ordinary engineers without any training in geometric tolerancing to perform at expert level and finish part tolerances in a fraction of the time compared to experts. The work is based on several publications by Dr. Faryar Etesami (etesamf@pdx.edu) and suggests implementing the structure of the SolidWorks software platform shown below.
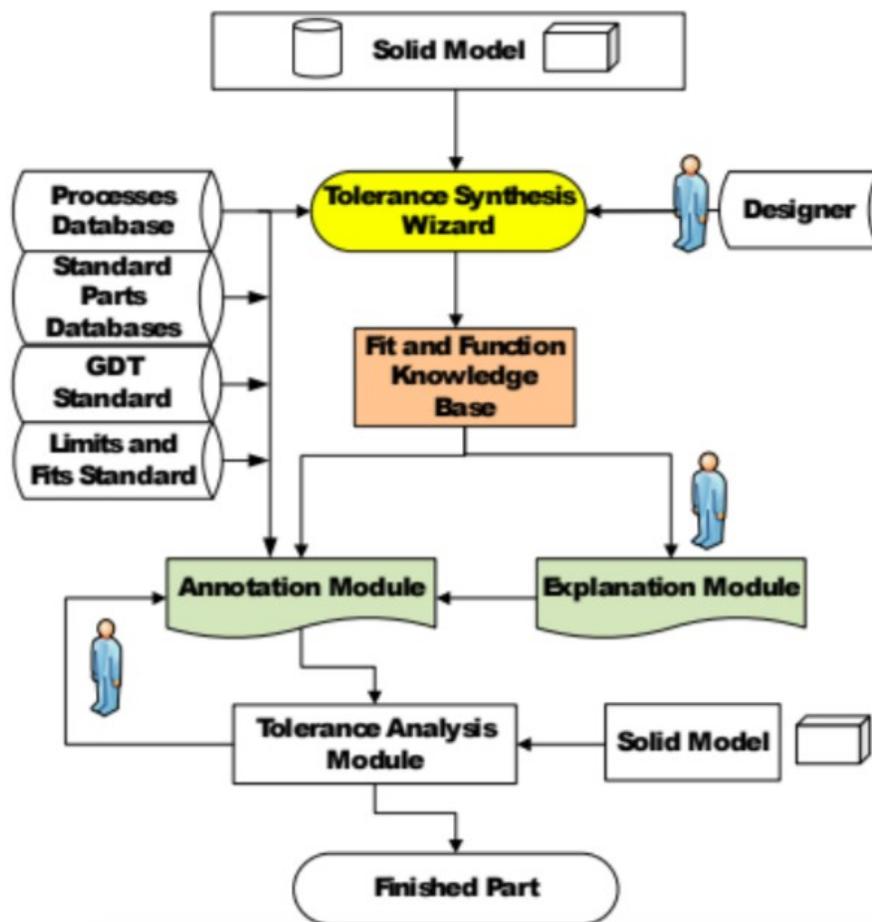
The highlights of the project is the development of a manufacturing processes accuracy database and a knowledge-base for fit and function that allows design-oriented language to be automatically converted to geometric tolerances. The SolidWorks software can attract many companies to join OMIC that may not have interest in advanced metal cutting or tooling research.

- **Project Outcomes:** The outcome of this research is a prototype software implemented on SolidWorks platform that allows any engineer to perform at expert level with regard to tolerance specifications.
- **Project Duration:** 9 months - July1, 2019 to March 31, 2020 for full implementation on SolidWorks platform –Additional time will be needed to implement on other platforms such as Catia, Pro-E, or Inventor.

2.0 General Information for All Proposals

- **Eligibility*:*** All faculty at OMIC R&D Research institutions and OMIC R&D technical staff.
- **Performance Period:** The Performance Period of the proposed work must be appropriate for the content given above in the Project Information sections. Requests for excessive or unjustified performance periods can be reason for proposal rejection by the OMIC Technology Board.
- **Award Amounts*:*** The funding requested must be appropriate for the content given above in the Project Information sections and consistent with any limitations given there. In all cases requested funds must be fully justified. Requests for excessive or unjustified funding can be reason for proposal rejection by the OMIC Technology Board.
- **Proposal Format, Content and Details:** All proposals must strictly follow the template given below and include all required sections
- **Submission Deadlines: Monday June 3, 2019**
- **How to Submit:** Send proposals by email to the OMIC R&D Project Manager, Ally Imbody *<alicia.imbody@oit.edu>*
- ***Proposal Review Process:*** Proposals will be reviewed and award decisions made by the OMIC Technical Advisory Board. The Board encourages collaboration between OMIC's university research partners in response to this RFP when collaboration will provide the best value for achieving the desired Project Outcomes. Evaluations will be based on the following criteria:
  - o Soundness of the proposed methodology
  - o Demonstrated subject-matter expertise of proposed staff
  - o Cost/reasonableness of proposed budget
  - o Timeline/adherence to proposed schedule
  - o Past performance (if applicable)

  Technology Board members will evaluate each eligible proposal submitted using a five-point scale where: 1- poor, 2-deficient, 3-acceptable, 4-superior, 5-outstanding. Evaluators will assign a default score of 3 for Past Performance if no information is available. All scores will be averaged by the Tech Board chair and a decision made based on the highest overall score.
- **Informational Contact:** Questions are to be directed to the OMIC Project Manager, Ally Imbody *<alicia.imbody@oit.edu>* by **Monday, April 29, 2019**. Consolidated questions will be sent to the Technology Board Chair and responses will be provided to all research partners by **Monday, May 6, 2019**.
- **Performance Requirements:** The PI and institution awarded the project will be

expected to progress the work expeditiously to meet all of the progress milestones shown in their proposed schedule (see section two below).

- **Project Termination:** The Tech Board reserves the right to cancel the project at any time.